



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/520,708	01/10/2005	Gabby Elgressy	1543/7	2465
7590 Mark Friedman Ltd Bill Polkinghorn 9003 Florin Way Upper Marlboro, MD 20772	01/12/2007		EXAMINER PHASGE, ARUN S	
			ART UNIT 1753	PAPER NUMBER
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
3 MONTHS		01/12/2007	PAPER	

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/520,708	GABBY ELGRESSY	
	<b>Examiner</b>	<b>Art Unit</b>	
	Arun S. Phasge	1753	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on \_\_\_\_.
- 2a) This action is **FINAL**.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-15 is/are pending in the application.
  - 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_ is/are allowed.
- 6) Claim(s) 1-15 is/are rejected.
- 7) Claim(s) \_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) All    b) Some \* c) None of:
    1. Certified copies of the priority documents have been received.
    2. Certified copies of the priority documents have been received in Application No. \_\_\_\_.
    3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____.                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date ____.  | 6) <input type="checkbox"/> Other: ____.                          |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1-4, 7-12 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hlavin, U.S. Patent 2,530,524 in view of Stephenson et al. (Stephenson), U.S. Patent 6,346,197 or Bradley, US 2004/0251213.

Hlavin discloses the claimed method for scale treatment in water supply systems comprising storage tank (the pipe would read upon the tank, since water

Art Unit: 1753

can be stored therein) the pipe having inlet and outlet (the flow of the water through the electrolytic device would read upon the turbulence providing mechanism and meet the limitations of claims 3-4), a metallic tank, at least one anode disposed within said tank and a DC electrical supply source (see figures 1-6 and col. 6). The reference further discloses the use of an elastic scraper to remove the scale deposited upon the cathode (see figure 2 and col. 3, lines 30-40).

The Hlavin patent does not disclose the precipitation of the scale removes the bacteria from water as claimed. The Bradley patent teaches it is known in the art that the application of an electric field can kill bacteria and the formation of coagulating materials can catch up and trap microorganisms in water (see page 1, section [0006].

The Stephenson patent likewise discloses the removal of bacteria by precipitation with metals and other suspended charged contaminants (see col. 8, lines 5-65). The reference further teaches the use of

Consequently, the invention as a whole would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the disclosure of the Hlavin patent with the teachings of the Bradley or Stephenson references, because the references teach the removal of bacteria by the

electrolytic treatment of water. The selection of materials for the electrodes, such as the TiNiO claimed would have been obvious to one having ordinary skill in the art, because such materials are routinely used in the art as electrodes and no unexpected results are obtained from such use.

Claims 5-6, 13 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hlavin in view of Stephenson or Bradley as applied to claims above, and further in view of Holt et al. (Holt), U.S. Patent 6,800,207.

The combination of Hlavin in view of Stephenson or Bradley fails to disclose the heat exchanger claimed or that the bacteria are legionella pneumophila. The Holt patent is cited to teach the use of electrocoagulation in heaters, which would read upon the heat exchanger claimed (see col. 2, lines 20-26). The reference further teaches that the legionella bacteria forms biofilms on surfaces submerged in water systems (see col. 2, lines 13-50).

The invention as a whole would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the disclosure of the of the combination of the references to use the electrocoagulation with a heat exchanger, because the Holt patent teaches the electrolytic treatment of water that is heat treated.

Art Unit: 1753

*Conclusion*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Arun S. Phasge whose telephone number is (571) 272-1345. The examiner can normally be reached on MONDAY-THURSDAY, 7:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nam X. Nguyen can be reached on (571) 272-1342. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Arun S. Phasge  
Primary Examiner  
Art Unit 1753

asp